



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/714,803	11/16/2000	Stephen J. Shellhammer	A33368-072797.0131	3975
21003	7590	12/15/2004	EXAMINER	
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			CRAVER, CHARLES R	
			ART UNIT	PAPER NUMBER
			2682	

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/714,803	<b>Applicant(s)</b> SHELLHAMMER ET AL.	
	<b>Examiner</b> Charles R Craver	<b>Art Unit</b> 2682	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20,23,25-28,39-44,55 and 56 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-19,23 and 25-28 is/are allowed.
- 6) ☒ Claim(s) 1,2,20,39-44 and 56 is/are rejected.
- 7) ☒ Claim(s) 3-13 and 55 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 discloses two transceivers, wherein in turn, the first is activated and then deactivated, then the second is activated, and then deactivated; however, the claim as amended states that the two operate 'substantially continuously', despite the aforementioned teaching of non-continuous operation.

For the purposes of examination, the examiner will read the limitation as the two transceivers *together* operating substantially continuously, however, the claim must be amended.

### ***Claim Rejections - 35 USC ' 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national

Art Unit: 2682

application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by

Vaisanen et al, US Pat 6,560,443.

**Claims 1 and 2:** Vaisanen discloses an apparatus for transmission coordination, comprising

a first radio transceiver (12) operating in accordance with a first communication protocol (Bluetooth) in a 2.4 Ghz frequency band (col 6 lines 54-66),

a second radio transceiver (11) operating in accordance with a second communication protocol (802.11) and using the same frequency band (col 6 lines 54-66, col 4 lines 43-62), and

a coordinator (14) associated with the transceivers for switching the first and second radio transceivers, which Vaisanen states includes making them operational, i.e. activating/deactivating them (col 4 lines 43-62). Since the first protocol is a Bluetooth protocol, it is read as a base station as it may operate in a Master mode.

The continuous operation of the device would inherently occur in a situation wherein the device needs to communicate on either system for a given period of time.

### ***Claim Rejections - 35 USC ' 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2682

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaisanen in view of Wright et al, US Pat 6,047,165.

**Claim 20:** Vaisanen discloses an apparatus for transmission coordination, comprising

a first radio transceiver (11) operating in accordance with an IEEE 802.11 protocol and using a frequency band of about 2.4 Ghz (col 6 lines 54-66, col 4 lines 43-62) and having a first antenna system (ANT 1),

a base station operating in accordance with the IEEE 802.11 protocol (col 1 lines 40-61, col 5 lines 22-26), and

a second radio transceiver (12) operating in accordance with a Bluetooth protocol and using the frequency band of about 2.4 Ghz (col 6 lines 54-66) and having a second antenna system (ANT 2).

Vaisanen fails to disclose that the first antenna system and the second antenna system are of orthogonal polarization.

Wright discloses an analogous art, that is, a system for use in a wireless LAN utilizing a 2.4 Ghz spectrum (col 2 lines 30-64) wherein a transceiver benefits from the use of two antennas like that taught by Vaisanen wherein said transceiver further benefits from using orthogonally polarized antennas (col 5 lines 8-36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use orthogonally polarized antennas in the invention of Vaisanen, as it would reduce interference, as suggested by Wright.

**Claim 56:** The Bluetooth protocol inherently operates at a level of 0dBm, as evidenced by Clapper, US Pat 6,023,241(col 3 lines 36-60).

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaisanen in view of Zyren, US Pat 6,377,608.

**Claim 23:** Vaisanen discloses an apparatus for transmission coordination, comprising

a first radio transceiver (11) operating in accordance with an IEEE 802.11 protocol and using a frequency band of about 2.4 Ghz (col 6 lines 54-66, col 4 lines 43-62),

a base station operating in accordance with the IEEE 802.11 protocol (col 1 lines 40-61, col 5 lines 22-26),

a second radio transceiver (12) operating in accordance with a Bluetooth protocol and using the frequency band of about 2.4 Ghz (col 6 lines 54-66).

Vaisanen fails to disclose that the IEEE 802.11 protocol transceiver uses one of two or more sub-bands and the second transceiver may look ahead to determine if the sub bands are in use.

Zyren discloses that Bluetooth and IEEE 802.11 systems which share the 2.4 Ghz spectrum may do so by using sub-bands of said spectrum (col 1 lines 21-55), and

Art Unit: 2682

that a Bluetooth device may look ahead to determine if the 802.11 system is using sub-bands than the Bluetooth system would nominally use, in order to find other bands to use to reduce interference (FIG 13, col 2 line 55-col 3 line 39).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Vaisanen by the teachings of Zyren, as Zyren states that using separate sub-bands of the 2.4 Ghz spectrum between the two standards lowers interference in the system as a whole.

Claims 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaisanen et al.

**Claim 39:** Vaisanen discloses a method for providing communications in a wireless data communications system having a mobile unit (10) arranged to communicate with an access point (AP) using a first data communications protocol (IEEE 802.11) and arranged to communicate with other devices using a second data communications protocol (Bluetooth), comprising

communicating data corresponding to said communication between said access point and said mobile unit using said first data communications protocol (col 6 lines 54-66, col 4 lines 43-62, col 1 lines 40-61, col 5 lines 22-26), and

communicating said data between said mobile unit and a portable device using said second data communication protocol, said communication being arranged at time intervals which avoid interference with said communicating using said first data

Art Unit: 2682

communications protocol (col 6 lines 54-66, that is to say, the user may receive 802.11 data from the AP and later transfer said data to a slave device).

Vaisanen further discloses a cellular phone, which inherently converts voice signals to data corresponding to said voice signals and converting data signals corresponding to voice signal into voice signals.

Vaisanen fails to disclose that the communicated data is voice data; however, it was notoriously well known in the art at the time of the invention to use a network connection to transmit voice data, such as recorded data or VoIP. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the invention of Vaisanen to receive and transmit voice data, as the use of voice data over a network was so well known at the time. **Claim 40:** the use of compressed data would have been further obvious to lower bandwidth.

**Claims 41-43:** Vaisanen discloses that said first communications protocol is the IEEE 802.11 protocol, and said second communication protocol is Bluetooth (reads ACL).

**Claim 44:** please see the rejection of claim 40 above.

### ***Allowable Subject Matter***

Claims 14-19, 23 and 25-28 are allowed.

Claims 3-13 and 55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



The following is a statement of reasons for the indication of allowable subject matter:

Claim 3 teaches towards a portable data communications terminal using a first and second 2.4 GHz transceiver, the first being an 802.11 transceiver communicating with a base station which provides control signals to the terminal to cause it to switch between the first and second transceivers.

Claims 14, 18 and 25 teach towards a portable data communications terminal using a first and second transceiver in the same band, the first communicating with a base station and having a power save mode, wherein a coordinator associated with a common housing for the transceivers deactivates the first transceiver and activates the second when the first transceiver is in a power save mode.

Claim 23 further discloses a look-ahead mode, which the specification and subsequent communication from the applicant defines as scanning subsequent time slots of the other system to determine the presence of interfering transmissions prior to original transmission on a given protocol.

Claim 25 further teaches a power saving mode in the first protocol including active and dormant time periods, said dormant time periods including communication via the second communications protocol with slave devices, and claim 26 adds controlling said device comprises providing a signal indicating that said active time period will commence following a predetermined time interval and terminating operation according to said second data communication protocol during said predetermined time interval.

***Response to Arguments***

Applicant's arguments filed 7-19-04 have been fully considered but they are not persuasive.

Regarding claim 1, note that the examiner is utilizing a broad reading of the limitation regarding continuous operation given the rejection under 35 USC 112 above. As to the use of two systems operating at the same time, while claim 1 discloses that, *in turn*, the first transceiver is operated, then the second, Vaisanen discloses that the two transceivers may not be used at the same time, however, such operation is an option, see col 4 line 63-col 5 line 4.

Regarding claim 20, note above that Vaisanen discloses that both transceivers may operate at the same time. Also, while the applicant states a different reason for using orthogonal antennas, however, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Since Vaisanen does not teach away from the simultaneous use of the two transceivers, such a combination is valid. Further, the reduction in interference is a goal that one of ordinary skill in the art would have recognized at the time of the invention, and would have noted Wright's teaching that orthogonal polarization reduces interference.

Regarding claim 39, the examiner upholds the rejection above. Since Vaisanen discloses a portable handset for communicating data through either an 802.11 base station or an ad-hoc Bluetooth network, data may be downloaded from e.g. the internet

via the 802.11 network (for example, a short speech file) and later sent over the ad-hoc network using the Bluetooth transceiver. This would have been an obvious use for a short-range wireless data transfer such as that envisioned by Vaisanen. As to the simultaneous operation of both transceivers, despite the fact that Vaisanen discloses simultaneous use, the claim does not specifically recite such a limitation, merely it states that a voice signal may be communicated using both transceivers, and the situation explained above meets such a limitation.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9306, (for formal communications intended for entry)

**Or:**

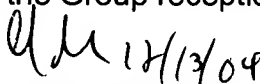
(703) 872-9314 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand delivered responses should be brought to Crystal Plaza II, 200  
South 20<sup>th</sup> St, Arlington VA, first floor lobby.

Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Charles Craver whose telephone number is (703) 305-  
3965.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, Vivian Chin, can be reached on (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the Group receptionist whose telephone number is  
(703) 305-4700.

  
**CHARLES CRAVER**  
**PRIMARY EXAMINER**

cc

C. Craver  
December 13, 2004